

clusively that the iodine penetrates the epidermis and is found in the superficial layers of the derma, this penetration being much less marked when the skin has been previously moistened by the application of water. Seelig and Gould (Surg. Gyn. & Obstet. 1911, vol. 12, p. 262), in a most ingeniously devised series of experiments, using a flap of living skin of the rabbit's abdomen, confirm the opinion of Grossisch. They were able to show that the tincture of iodine penetrates more rapidly than alcohol in direct proportion to the iodine content, and that the higher strength alcohols were more efficient than those of lower strength.

All experimenters agree that the iodine exerts but an inhibitive action upon bacterial life, cultures invariably being positive after the removal of the iodine with thiosulphate of soda.

In the Congress of the German Surgical Society of this year (Zentralblatt f. Chir. 1911, No. 29, supp. p. 1, et seq.) Küttner, who interviewed 187 surgeons, reports that those using the method without previous preparation of the patient, are universally in favor of the method. Of 113 operators who used tincture of iodine after first scrubbing the patient with other substances, 78% report cases of eczema; of 74 operators who used tincture of iodine with no previous preparation of the patient, but 8% complained of having had cases of eczema. Küttner sums up the advantages of the method as follows: The procedure is (1) without special preparation available even under unfavorable external conditions, (2) can be carried on in a few seconds, (3) is effective in a few minutes, (4) can be used in every variety of wound and operation, (5) its efficiency is absolutely sure, (6) the technic is so simple that even unschooled and but superficially instructed personnel may be trusted to carry it out, (7) it is humane. He further states that in his opinion it is the only method of disinfection of the operative field.

The technic is as follows: if the patient be in hospital the evening before the operation he may have a full bath without special attention being paid to the operative field. The field is shaved (soap and water) but no local dressings are applied. On the day of the operation, after narcosis has been commenced, the field of operation is painted with freshly prepared 5% tincture of iodine (half strength U. S. P. is effective). Immediately before the beginning of the operation the field is again painted with the same solution. For emergency operations dry shaving, painting of the field with 5% tincture of iodine, *without any sort of previous preparation*.

Although nearly all observers are lavish in their praises of the method, here and there we meet with the opinion of men perfectly competent to judge in these matters who believe they have proved the method to be totally inefficient. Tinker and Prince (Surg. Gyn. & Obstet. 1911, vol. 12, p. 530) detail a series of experiments upon human skin infected with bacillus subtilis in which the tincture of iodine according to the method of Grossisch was inert.

Although, no doubt, good results are obtained by any of the current methods now in vogue, the Grossisch technic is the method par excellence for

the field, the mine and the lumber camp, and bids fair to replace the long and tedious methods heretofore employed, their efficiency being proportioned to the care with which they are carried out.

S. H.

Medicine is making great strides and every year finds new methods of diagnostic precision. It is becoming imperative and more necessary for the general practitioner to have a reasonable working knowledge of these newer methods and to be conversant with the instruments. While he cannot hope to become expert in the use of those procedures used only in a limited number of cases he should perfect himself in utilizing appliances that will be found helpful daily.

#### OPHTHALMOSCOPY IN MEDICINE.

It is now sixty years since Helmholtz invented the ophthalmoscope and what a small minority of medical men can examine the ocular fundus. Its use is practically confined to a few diagnosticians, neurologists and men specializing in ophthalmology. This positively spells of medievalism and is no credit to the profession. Think of it gentlemen, sixty years since a most useful and very inexpensive instrument has been perfected and but a minority of you make use of it.

Within the past decade the electric ophthalmoscope has been made practicable, so much so, that one can learn to see the fundus with little practice and carefully study the interior of the eyeball. Nowhere else in the system can one see blood coursing through the vessels, both arteries and veins, examine their coats and have under inspection a nerve trunk coming directly from the cranium, a piece of the brain, as it were, pushed under your eye.

A five per cent. solution of euphthalmine instilled once or twice into the eye will cause a dilation of the pupil, furthering the ease of examination, without the fear of raising the tension and causing glaucoma.

Other mydriatics should not be used before the fundus has been examined as they raise tension and occasionally may be followed by an attack of acute glaucoma.

Numerous diseases of the central nervous system produce changes within the eye and often a beginning optic nerve atrophy is the first sign of incipient spinal sclerosis. The circulatory system also shows here with hyperaemias, anaemias, hemorrhages and changes within the walls of the vessels, etc. Diabetes and nephritis are often first suspected after using the ophthalmoscope.

Syphilis, either when inherited or acquired at times manifests itself here as does miliary tuberculosis.

To epitomize: The ophthalmoscope is now a handy, inexpensive, simple and useful instrument which should be used as a measure of routine examination in internal medicine and the general practitioner has not fully protected his patient if not utilizing this simple and useful aid in diagnosis.

W. S. F.